

# **System And Method For Simulating A Circuit Having Hierarchical Data Structure**

## **Abstract of the Disclosure**

A system for simulating a circuit having hierarchical data structure includes a simulator module having one or more computer programs for 1) creating a static database in accordance with a netlist description of the circuit, where the static database contains topology information of the circuit; 2) selecting a group circuit for simulation, where the group circuit contains one or more leaf circuits selected from the first branch and the second branch; 3) creating a dynamic database for representing the group circuit, where the dynamic database includes references to the static database for fetching topology information dynamically during simulation; and 4) simulating the group circuit in accordance with the dynamic database. Since the system duplicates and reproduces only the relevant dynamic information when necessary, the disclosed circuit simulator uses less memory and produces better performance.